

21



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/337,500	06/22/1999	TOMOHISA YAMAGUCHI	2565-0175P	9078
7590 03/27/2006				
Birch Stewart Kolasch & Birch Post Office Box 747 Falls Church, VA 22040-0747			EXAMINER NGUYEN, THU HA T	
			ART UNIT 2155	PAPER NUMBER

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/337,500	Applicant(s) YAMAGUCHI, TOMOHISA	
	Examiner Thu Ha T. Nguyen	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-16, 18 and 20 are presented for examination.
2. Claims 1, 11, 15, and 18 are currently amended.
3. Claims 17 and 19 are cancelled without prejudice.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on November 28, 2005 has been entered.

Claim Objections

5. Claims 1, 11, and 15 are objected to because of the following informalities:
6. Claims 1 and 11 recited the limitations "the execution of the function execution module" and "the desired device apparatus". There is insufficient antecedent basis for these limitations in these claims. Appropriate correction is required.
7. Claim 15 recited the limitations "the memory", "the desired device apparatus", and "the external resource". There is lack of antecedent basis for these limitations in this claim. Appropriate correction is required.

Response to Arguments

8. Applicant's arguments with respect to claims 1-16, 18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3, 5, 6, 11, 13, 15 and 16-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tock U.S. Patent No. 5,815,718, in view of Domenikos et al., (hereinafter Domenikos) U.S. Patent No. 5,838,910.

11. Referring to Claim 1, **Tock** discloses a system of dynamic module configuration which is linked through a network comprising:

a memory, linked to the network, for memorizing a plurality of function executing modules which execute specific processes (Figure 1 Item 110 and col. 11 Lines 37-42);

a request device, located on said network remotely from said memory (figure 1, client 102 located remotely from memory 110), which outputs an execution request for executing one of the specific processes (Figure 1 Item 102, col. 3 lines 52-55); and

an execution device, integrated within one of a plurality of different device apparatus, for receiving, through the network, the execution request output from the request device (abstract, col. 3 lines 46-49), acquiring, through the network, one of the plurality of function executing modules which has a function of realizing the execution request from the memory, executing the acquired function execution module (col. 5 lines 20-25) and providing a result of the execution of the function execution module to the request device (figures 1, 2, col. 1 lines 40-col. 2 lines 11 col. 3 lines 53-col. 4 lines 44).

However, **Tock** does not explicitly teach an execution device located on said network remotely from said memory and said request device and wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module.

Domenikos, in the same field of endeavor, teaches an execution device located on said network remotely from said memory and said request device (abstract, figures 1-4).

Tock suggests a system of a request device (i.e. client computer 102) located remotely from an execution device (i.e. server 108) and the execution device having memory to modify the system of request device and execution device located an execution device located on network remotely from said memory by Domenikos (abstract, figures 1-4, col. 8, lines 20-24, lines 44-48). One of ordinary skill in the art

Art Unit: 2155

would have been motivated to modify **Tock** in view of **Domenikos** because it would increase the speed of execution of application remotely and reduce the storing load on server as suggested by **Domenikos** (col. 2, lines 50-60, col. 5, lines 48-64).

Jin teaches the feature of wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module (abstract, col. 2, line 63-col. 3, line 9, col. 6, line 7-col. 8, line 12, col. 12, line 15-col. 13, line 42).

It would have been obvious to one of ordinary skill the art at the time the invention was made to incorporate the teaching **Jin** into **Tock** and **Domenikos** system to include the feature of each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module because it would have provided an improved system of dynamic content method for serving documents and other data to clients (see **Jin** col. 4, line 15-23).

12. Referring to Claim 3 and 13, **Tock** discloses a system of dynamic module configuration of claim 1, wherein the execution device stores the acquired function execution module after the acquired function execution module has been executed (col.

Art Unit: 2155

3, lines 14-17), and re-executes the acquired function execution module stored in the execution device when it is requested to execute a module having a function corresponding to the acquired function execution module. (Random access memory, as known in the art, is organized and controlled in a way that enables data to be stored and retrieved quickly by the computer's processor).

13. Referring to Claim 5, **Tock** discloses a system of dynamic module configuration of claim 1, wherein the request device and the memory are installed in a device (Figure 1 Item 100 and Item 102).

14. Referring to Claim 6, **Tock** discloses a system of dynamic module configuration of claim 1, wherein the request device is a client which outputs a contents request corresponding to the execution request (figure 1 item 102 and col. 3 lines, 52-55), the execution device is a server which receives the contents request and responds to the contents request (figure 1 item 104 and col. 4, lines 1-6), and the memory is a module storing server which stores the plurality of function executing modules for responding to the contents request (figure 1 item 128 and col. 11, lines 37-42).

15. Referring to Claim 11, **Tock** discloses a dynamic module configuration method using a network comprising the steps of:

storing in a memory a plurality of function executing modules for executing specific processes (abstract, col. 11, lines 37-42);

outputting, by a request device within one of a plurality of different device apparatus through the network, an execution request for executing one of the specific processes; and receiving, by an execution device, the execution request through the network, acquiring, through the network, one of the plurality of function executing modules from the memory which has a function of realizing the execution, executing the acquired function execution module and providing a result of the execution of the function execution module to the request device (abstract, figures 1, 2, col. 1 lines, 40-col. 2 lines, 11, col. 3 lines, 46-col. 4 lines, 65 and col. 5 lines, 20-25).

However, **Tock** does not explicitly teach an execution device located on said network remotely from said memory and said request device and wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module.

Domenikos, in the same field of endeavor, teaches an execution device located on said network remotely from said memory and said request device (abstract, figures 1-4).

Tock suggests a system of a request device (i.e. client computer 102) located remotely from an execution device (i.e. server 108) and the execution device having memory to modify the system of request device and execution device located an execution device located on network remotely from said memory by Domenikos (abstract, figures 1-4, col. 8, lines 20-24, lines 44-48). One of ordinary skill in the art

Art Unit: 2155

would have been motivated to modify **Tock** in view of **Domenikos** because it would increase the speed of execution of application remotely and reduce the storing load on server as suggested by **Domenikos** (col. 2, lines 50-60, col. 5, lines 48-64).

Jin teaches the feature of wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module (abstract, col. 2, line 63-col. 3, line 9, col. 6, line 7-col. 8, line 12, col. 12, line 15-col. 13, line 42).

It would have been obvious to one of ordinary skill the art at the time the invention was made to incorporate the teaching **Jin** into **Tock** and **Domenikos** system to include the feature of each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module because it would have provided an improved system of dynamic content method for serving documents and other data to clients (see **Jin** col. 4, line 15-23).

16. Referring to Claim 15, **Tock** discloses a system of dynamic module configuration comprising:

an internal resource of a device for performing an original function of the device

(col. 11 lines, 37-42); and

an execution device, integrated within the device, for receiving an execution request, through the network, which requests a performance of a function of the device, acquiring, from an external resource, one of a plurality of function execution modules which has a function of realizing the execution request, and executing the acquired function execution module, wherein the receiving, acquiring and executing are performed by using a part of the internal resource and wherein an executed result is obtained from executing the function execution module and the result is provided to the device (abstract, figures 1, 2, col. 2 lines, 53-57 and 65-67, col. 3 lines, 53-col. 4 lines, 65, col. 5 lines, 20-25).

However, **Tock** does not explicitly teach the external resource is located remotely on said network from said execution device and wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module.

Domenikos, in the same field of endeavor, teaches the external resource is located remotely on said network from said execution device (abstract, figures 1-4, col. 8, lines 20-24, lines 44-48).

Tock suggests a system of a request device (i.e. client computer 102) located remotely from an execution device (i.e. server 108) and the execution device having memory to modify the system of request device and execution device located an

Art Unit: 2155

execution device located on network remotely from said memory by **Domenikos** (abstract, figures 1-4, col. 8, lines 20-24, lines 44-48). One of ordinary skill in the art would have been motivated to modify **Tock** in view of **Domenikos** because it would increase the speed of execution of application remotely and reduce the storing load on server as suggested by **Domenikos** (col. 2, lines 50-60, col. 5, lines 48-64).

Jin teaches the feature of wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module (abstract, col. 2, line 63-col. 3, line 9, col. 6, line 7-col. 8, line 12, col. 12, line 15-col. 13, line 42).

It would have been obvious to one of ordinary skill the art at the time the invention was made to incorporate the teaching **Jin** into **Tock** and **Domenikos** system to include the feature of each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module because it would have provided an improved system of dynamic content method for serving documents and other data to clients (see **Jin** col. 4, line 15-23).

17. Referring to Claim 16, **Tock** discloses a system of dynamic module configuration of claim 15, wherein the internal resource includes a central processing unit and a memory (Figure 1 Item 110 and 112), the execution device includes a program stored in the memory and executed by the central processing unit (Figure 1 Item 100), and the external resource includes a memory, being independent of the device, for memorizing the plurality of function execution modules (Figure 1 Item 108).

18. Referring to claim 18, **Tock** teaches the invention substantially as claimed, including a method of providing execution module instructions to plural of operation devices on a network, comprising the steps of:

storing plural diverse execution modules in a memory, each of said execution modules containing a set of instructions uniquely usable by an operational device (abstract, figures 1-2, col. 11 lines, 37-42);

requesting an action by a request device to be performed by a selected operational device which is achieved through a set of instructions contained in a requested execution module (Figure 1 Item 102, col. 3 lines, 52-55);

acquiring said requested execution module by an execution device integrated said selected operational device from said memory, said operational device executing said set of instructions contained in said requested execution module to perform the requested action (figures 1, 2, col. 1 lines, 40-col. 2 lines, 11 col. 3 lines, 46-col. 4 lines, 44, col. 5 lines, 20-25).

However, **Tock** does not explicitly teach an operation device is located on said

network remotely from said memory and the request device is remotely located on the network from said plural operational devices and said memory and wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module.

Domenikos, in the same field of endeavor, teaches an operational device is located on said network remotely from said memory, and the request device is remotely located on the network from said plural operational devices and said memory (abstract, figures 1-4, col. 8, lines, 20-24, lines, 44-48).

Tock suggests a system of a request device (i.e. client computer 102) located remotely from an execution device (i.e. server 108) and the execution device having memory to modify the system of request device and execution device located an execution device located on network remotely from said memory by **Domenikos** (abstract, figures 1-4, col. 8, lines 20-24, lines 44-48). One of ordinary skill in the art would have been motivated to modify **Tock** in view of **Domenikos** because it would increase the speed of execution of application remotely and reduce the storing load on server as suggested by **Domenikos** (col. 2, lines 50-60, col. 5, lines 48-64).

Jin teaches the feature of wherein each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled

Art Unit: 2155

from the execution of the function execution module (abstract, col. 2, line 63-col. 3, line 9, col. 6, line 7-col. 8, line 12, col. 12, line 15-col. 13, line 42).

It would have been obvious to one of ordinary skill the art at the time the invention was made to incorporate the teaching **Jin** into **Tock** and **Domenikos** system to include the feature of each execution request has one corresponding function execution module stored in the memory that related to the execution request for the desired device apparatus, the function execution module being installed in the execution device upon acquiring from the memory and uninstalled from the execution of the function execution module because it would have provided an improved system of dynamic content method for serving documents and other data to clients (see Jin col. 4, line 15-23).

19. Referring to claim 20, **Tock** discloses the invention substantially as claimed, wherein the operational device includes an execution device for executing the requested execution module acquired from said memory (abstract, figures 1, 2, col. 1 lines, 40-col. 2 lines, 11 col. 3 lines, 46-col. 4 lines, 44, col. 5 lines, 20-25).

20. Claim 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tock**, **Domenikos** and **Jin**, further in view of **Snyder et al.** (hereinafter Snyder) U.S. Patent No. **6,161,147**.

21. Referring to Claim 2 and 12, **Tock-Domenikos-Jin** discloses a system of dynamic module configuration of claim 1.

However, **Tock-Domenikos-Jin** system does not explicitly disclose wherein the execution device deletes the acquired function execution module after the acquired function execution module has been executed.

Snyder teaches a variety of methods for managing deactivation and deletion of objects and server processes. Further, **Snyder** discloses a timeout criterion where the deletion of an object or processes takes place if the period of time since the last client requested services from the object is greater than a timeout value (Abstract, figures 6, col. 2 lines, 15-col. 3 lines, 7). The timeout criterion and deletion of the acquired function module, as known in the art, both releases memory and resources thereby improving efficiency and performance of the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dynamic module configuration system as disclosed by **Tock-Domenikos-Jin** to delete the function execution module after execution, as disclosed by **Snyder**, in order to release resources and improve the efficiency and performance of the system.

22. Claim 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tock-Domenikos-Jin**, further in view of **Tso et al.** (hereinafter Tso) U.S. Patent **6,247,050**.

23. Referring to Claim 4 and 14, **Tock-Domenikos-Jin** discloses a system of dynamic module configuration of claim 1.

However, **Tock-Domenikos-Jin** does not explicitly disclose wherein the memory

Art Unit: 2155

caches the function execution module acquired by the execution device and provides the function execution module cached in the memory when it is requested to acquire a module, which has a function corresponding to the function execution module cached in the memory, by the execution module.

Tso teaches that a server-side cache memory may be used to store both original and transcoded versions of content for later transmission to network client without the need to re-retrieve the content from Internet or to re-transcode the content (abstract, figures 3, 6, col. 4 lines, 30-col. 5 lines, 7).

Since the function execution module, as known in the art, is a program or a function, it can also be stored for later transmission to the network client. Memory caching provides more effective and efficient client-server communication because most programs access the same data or functions repeatedly. By keeping as much of this information as possible in static memory, the computer can avoid accessing the slower dynamic memory. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Tso** into **Tock-Domenikos-Jin** to include the system of dynamic module configuration to cache the function execution module because memory caching provides more effective and efficient client-server communication.

24. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tock-Domenikos-Jin**, further in view of **Kimishima** U.S. Patent **5,978,846**.

25. Referring to Claim 7, **Tock-Domenikos-Jin** discloses a system of dynamic module configuration of claim 6 wherein the server includes a communication interface (Figure 1 Item 116), a user interface (Figure 1 Item 114) and a processor (Figure 1 Item 112, Processor read as contents-analyzing module and module-executing module).

However, **Tock-Domenikos-Jin** does not explicitly disclose a system of dynamic module configuration wherein the server is further composed of a contents-request receiving module and module-requesting module.

Kimishima discloses a system wherein the communications interface module specifically includes a contents-request receiving module for receiving the contents request from the client (Figure 1 Item 403, Figure 8 Item S401), a module requesting module for requesting a selected function executing module from the module storing server based on an analyzing result by the contents-request analyzing module (col. 2 lines 45-49), and for receiving the selected function executing module from the module storing, and a module executing module for executing the selected function executing module received by the module requesting module (col. 6 lines, 37-41, Figure 1 item 402). **Tock** fails to mention a contents-request analyzing module for analyzing the contents request received by the contents-request receiving module in order to select one of the plurality of function executing modules which has a function needed in responding to the contents request. However, a Java Virtual Machine is deemed to be inherited through the processing of a Java application disclosed by **Tock**. Java Virtual Machine's main job, as well known in the art, is to interpret, analyze and load the

needed class files and execute the bytecodes they contain.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of **Kimishima** into **Tock-Domenikos-Jin** to further separate the communications interface into a contents-request receiving module and module requesting module so that both modules can work simultaneously thereby allowing quicker and more efficient processing of information.

26. Referring to Claim 8, **Tock-Domenikos-Jin** discloses a system of dynamic module configuration of claim 7.

However **Tock-Domenikos-Jin** does not explicitly disclose a system of dynamic module where in the module storing server is composed of a plurality of modules including the module-request receiving module, module acquiring module, and a module transmitting module.

Kimishima discloses a system wherein the module storing server includes a module-request receiving module for receiving a module request from the module requesting module (Figure 1 Item 405), a module acquiring module for acquiring a function executing module out of the plurality of function executing modules based on the module request received by the module-request receiving module (col. 2 lines, 45-49), and a module transmitting module for transmitting the function executing module acquired by the module acquiring module to the server (Figure 1 Item 402).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify decompose the module storing server as

disclosed by **Tock-Domenikos-Jin** to include a plurality of modules disclosed by **Kimishima** so that modules can work simultaneously thereby allowing quicker and more efficient processing of information.

27. Referring to Claim 9, **Tock** discloses a system of dynamic module configuration of claim 7, wherein the server further includes a module storing module for storing the selected function executing module acquired from the module storing server as many as possible in a resource of the server (col. 3 lines, 14-17).

28. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Tock-Domenikos-Jin** as applied to claim 8 above, and further in view of **Kimishima** and **Tso**.

29. Referring to Claim 10, **Tock-Domenikos-Jin-Kimishima** discloses a system of dynamic module configuration of claim 8.

However, **Tock-Domenikos-Jin-Kimishima** does not explicitly disclose wherein the module-storing server further includes a module-caching module for caching the selected function-executing module after the selected function-executing module has been sent to the server.

Tso teaches that a server-side cache memory may be used to store both original and transcoded versions of content for later transmission to network client without the need to re-retrieve the content from Internet or to re-transcode the content (abstract,

Art Unit: 2155

figure 1, col. 2 lines 17-col. 4 lines 36). Since the function execution module, as known in the art, is a program or a function, it can also be stored for later transmission to the network client. Memory caching provides more effective and efficient client-server communication because most programs access the same data or functions repeatedly. By keeping as much of this information as possible in static memory, the computer can avoid accessing the slower dynamic memory. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the module-storing server to include a module-caching module because memory caching provides more effective and efficient client-server communication.

Conclusion

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a) Britton et al. (USPN 6,279,030) discloses system and method for a program component can be dynamically Java class selected for downloading, based on current values of one or more changeable attributes.

b) Wollrath et al. (USPN 6,237,024) discloses system and method for the suspension and continuation of remote processes.

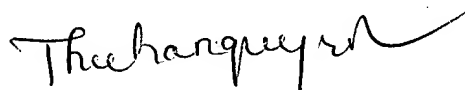
c) Jin et al. (USPN 6,330,689), discloses system and method for server architecture detection and recovery of failed out-of-process application.

d) Hayles et al. (USPN 6,243,738), discloses system and method for data acquisition which includes remote access to data acquisition devices.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ThuHa Nguyen

Patent Examiner

March 19, 2006